

# Fact Sheet



## For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-09900010-2017**  
Application Received: **October 24, 2016**  
Plant Identification Number: **03-54-099-00010**  
Permittee: **Braskem America, Inc.**  
Facility Name: **Neal Plant / Kenova**  
Mailing Address: **200 Big Sandy Road, Kenova, WV 25530**

*Revised: NA*

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Physical Location:	Kenova, Wayne County, West Virginia
UTM Coordinates:	360.60 km Easting • 4246.10 km Northing • Zone 17
Directions:	From I-64 take Exit 1. Go south on US 52, approximately 2 miles to the stop sign and turn right. Then take another right at "T" intersection and then go 1/4 mile then turn left just after going through railroad underpass. Make a left after underpass and go one mile to the plant entrance on the right.

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### Facility Description

Braskem America, Inc. (Braskem) owns and operates a polypropylene resin manufacturing facility located in Kenova, WV; the facility is commonly referred to as the Neal Plant. The Neal Plant operates under SIC code 2821. The process to produce polypropylene resin includes a feed purification system, a polymerization process, and a product finishing and shipping area. The Neal Plant's process includes a catalyst preparation system, two reaction loops, a material recovery step, and product extrusion process. The Neal Plant also operates a number of boilers to supply steam to various areas of the facility. The facility has the potential to operate 24 hours a day, 7 days a week.

## Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2016 Actual Emissions
Carbon Monoxide (CO)	74.91	23.44
Nitrogen Oxides (NO <sub>x</sub> )	72.95	21.56
Particulate Matter (PM <sub>2.5</sub> )	90.11	52.27
Particulate Matter (PM <sub>10</sub> )	92.94	55.10
Total Particulate Matter (TSP)	103.85	67.75
Sulfur Dioxide (SO <sub>2</sub> )	1.04	0.44
Volatile Organic Compounds (VOC)	208.76	51.35
<i>PM<sub>10</sub> is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2016 Actual Emissions
Total HAPs	1.56	1.34

*Some of the above HAPs may be counted as PM or VOCs.*

## Title V Program Applicability Basis

This facility has the potential to emit 209 tons per year of VOCs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Braskem America, Inc.'s Neal Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

## Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

### Federal and State:

45CSR2	To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers
45CSR6	Open burning prohibited
45CSR7	To Prevent And Control Particulate Matter Air Pollution From Manufacturing Processes And Associated Operations
45CSR10	To Prevent And Control Air Pollution From The Emission Of Sulfur Oxides
45CSR11	Standby plans for emergency episodes
45CSR13	Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, And Procedures For Evaluation
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting

45CSR30	Requirements For Operating Permits
45CSR16	Standards Of Performance For New Stationary Sources
45CSR34	Emission Standards For Hazardous Air Pollutants
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
40 CFR Part 60, Subpart VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006
40 CFR Part 60, Subpart DDD	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry
40 CFR Part 61	Asbestos inspection and removal
40 CFR Part 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR 64	Compliance Assurance Monitoring
40 C.F.R. Part 82, Subpart F	Ozone depleting substances
<u>State Only:</u>	
45CSR4	No objectionable odors.
45CSR21	Regulation To Prevent And Control Air Pollution From The Emission Of Volatile Organic Compounds

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

### Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-1830M	June 1, 2017	
G60-C019	August 3, 2010	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

### Determinations and Justifications

This is a renewal of the Title V permit which was issued on April 24, 2012 and modified on October 1, 2012, November 27, 2013 and September 15, 2014. The renewal permit also includes a minor modification (MM04) to the current permit R30-09900010-2012. MM04 incorporates R13-1830M which is an Administrative Amendment to Permit R13-1830K that; 1) Removed boiler B603 that has been shut down and removed from the site and 2) Based on newly revised AP-42 factors, increased the hourly and annual VOC emission rates from the flares.

Significant changes to the most recent version of the Title V Permit consist of the following:

- 1) **General Revisions:** 1) For clarity, the descriptions for Sections 4.0, 5.0, 6.0, 7.0 and 8.0 have been revised. 2) The “Streamlining” language in several conditions throughout the permit has been slightly revised. 3) In some instances, a more specific citation of authority has been added to some of the condition requirements. 4) If an emission point ID or emission unit ID is listed in a particular permit condition or conditions or in the section description for which the requirement(s) pertains, the Emission Point ID(s) next to the citation of authority has been removed.
- 2) **Title V Boilerplate changes:**
  - **Conditions 3.5.3., 3.5.5. and 3.5.6.** - These conditions were revised to require electronic submittal of the Title V compliance certifications (annual and semi-annual), self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols to the WV DAQ.
- 3) **Emission Units Table Section 1.1** – The following changes have been made to the equipment table:
  - Removed Boiler B603
  - Corrected the description for EG-1, EG-2 and EG-3 to describe them as emergency fire pumps. Also added Caterpillar model numbers.
  - Moved Cooling tower to Section 001
  - Moved LDAR Components (A-10, A-11, A-15 and A-16) to Section 002
  - Added DS503 vent to Section 003 which was previously omitted from the table
  - D-8808 and D-8809 were replaced with L-739 in 1988 with no change in emissions. Therefore, D-8808 and D-8809 have been removed from the table and L-739 has been added.
  - Removed G-0908 Cartridge filter as a control device for G-0904 since it is not associated with G-0904
- 4) **Condition 3.14.** – Added streamlining language for compliance with the 45CSR§6-4.6. odor requirements.
- 5) **Condition 3.1.8.** – Revised the language to state that the Neal Plant is subject to 40 CFR Part 68.
- 6) **Condition 3.7.2.** – The permittee requested a permit shield for several non-applicable regulations that were not previously listed. They have been added to this condition of the permit.
- 7) **Condition 4.1.2.** – Deleted the emission limits for Boiler #3 (B603).
- 8) **Condition 4.1.4.** – The requirements for Boiler B603 have been removed. Consequently, conditions 4.1.4.1. and 4.1.4.4. of the current permit have been deleted. The remaining sub-section requirements in 4.1.4. have been renumbered.
- 9) **Condition 4.2.1.** – Reference to Boiler #3 has been deleted. The description for “Boiler #1” and “Boiler #4” has been revised to “Boiler B600” and “Boiler B 604.”
- 10) **Condition 4.3.1.** – The requirements for Boiler #3 (B603) in this condition of the current permit have been removed. The subsequent condition has been renumbered as 4.3.1. in the renewal permit.

- 11) **Condition 4.4.1.** – The reference to boiler B603 has been removed.
- 12) **Conditions 4.5.2. and 4.5.3** – These conditions are obsolete and therefore have been removed.
- 13) **Condition 6.1.8.** – Revised the VOC emission limits for ISBL and OSBL flares.
- 14) **Condition 7.4.2. (current permit)** – This condition has been satisfied and therefore has been removed. The subsequent condition has been renumbered as 7.4.2. in the renewal permit.
- 15) **Section 8.0** – The description has been revised to clarify that EG-1, EG-2 and EG-3 are emergency fire pumps and not emergency generators. The following note has been added to the beginning of this Section 8.0: **“Except for Condition 8.1.1. and as specified in Condition 8.1.4. and 8.4.6., the requirements of this section are applicable only to EG-1 and EG-2.”**

The Neal Plant became an Area Source of HAPs on January 4, 2010 with the permanent shutdown of the coal fired boiler B602. Per 40 CFR §63.6595(a), since EG-1 and EG-2 are existing stationary CI RICE less than 500 HP, the 40 CFR 63 Subpart ZZZZ compliance date for these engines was May 3, 2013. Since the facility became an area source of HAPs before the subpart compliance date, EG-1 and EG-2 are subject to the area source requirements of 40 CFR 63 Subpart ZZZZ.

The current permit applied the area source requirements to all three engines. However, per 40 CFR §63.6595(a), since EG-3 is an existing emergency stationary RICE greater than 500 HP, the 40 CFR 63 Subpart ZZZZ compliance date for EG-3 was June 5, 2007. In keeping with the USEPA’s policy of “once in always in” for MACT applicability since the facility became an area source of HAPs after the subpart compliance date, EG-3 is subject to the major source HAP requirements in 40 CFR 63 Subpart ZZZZ. Per 40 CFR §63.6590(b)(iii) since EG-3 is an *“Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii),”* it does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and of 40 CFR 63 Subpart A, including initial notification requirements.

Condition 8.1.4. in the Title V permit contains the requirements of 40 CFR §63.6640(f) which mandates how an emergency RICE must be operated in order to be considered emergency stationary RICE under Subpart ZZZZ. Except for 8.1.4.(f)(4), permit condition 8.1.4. is applicable to EG-3.

- 16) **Condition 8.1.1.** – The language in the condition has been revised to reflect that the emergency Reciprocating Internal Combustion Engines (RICE) are compression Ignition (CI) fire pump engines. The requirements of General permit G60-C §5.1.3. have been added to this condition.
- 17) **Condition 8.1.2.** – The startup requirements language from 40 CFR 63 Subpart ZZZZ (Subpart ZZZZ) has been added to this requirement as well as footnote 2 from Subpart ZZZZ Table 2d.
- 18) **Condition 8.1.3.** – The obsolete language of the current permit has been replaced with the requirements of 40 CFR §63.6640(a) and Table 6 - Item 9 in the renewal permit.
- 19) **Condition 8.1.4.** – Updated 40 CFR §63.6640(f) to the most current language in Subpart ZZZZ and specified which parts of condition 8.1.4. are applicable to each engine.

- 20) **Conditions 8.4.3., 8.4.4., and 8.4.5. (Renewal Permit)** – The requirements of 40 CFR §63.6655(a), §63.6655(d) and §63.6660(a) and 63.10(b)(1) have been added in these respective permit conditions.
- 21) **Condition 8.4.6. (Renewal Permit)** – The requirements of General permit G60-C §5.4.1. have been added to this condition.
- 22) **Conditions 8.5.3. and 8.5.4. (Renewal Permit)** – The requirements of 40 CFR §63.6650(d) and §63.6650(f) have been added in these respective permit conditions.

### Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- 1) **40 CFR 60 Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*:** Boiler #1 (B600) commenced construction prior to June 9, 1989 and has not undergone a modification or reconstruction. The addition of a low NO<sub>x</sub> burner in 1995 is not considered a modification under 40CFR60, Subpart A.

Boilers H-081 and H-082 each have maximum design heat inputs less than 10 MMBtu/hr.

- 2) **40 CFR 60, Subpart DDD - *Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry*:** Tanks F-698, D103, D105, D106A, D106B, D107, D110A, D110B, F-8809A, F-8809B, F291, H-9209A tank, H-9209B tank, F1000, F290, F704, and F707 are not affected facilities as they are not included in the definitions of the affected sources (i.e., raw materials preparation, polymerization reaction, material recovery, product finishing, and product storage).
- 3) **40 CFR 60, Subpart VVa - *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006*:** The Neal Plant does not produce, as intermediates or final products, any of the chemicals listed in 40 CFR §60.489, and therefore is not included as an affected facility in the definition for “synthetic organic chemical manufacturing industry” per 40 CFR §60.481a.
- 4) **40 CFR 63, Subpart EEEE - *National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)*:** The liquid materials handled and processed at the facility do not contain organic HAPs listed in Table 1 of this subpart in concentrations of five (5) percent by weight or greater as determined according to the procedures specified in 40 CFR §63.2354(c). Therefore in accordance with the definitions in 40 CFR §63.2406, the Neal Plant is not defined as “an organic liquids distribution” (OLD) operation.
- 5) **40 CFR 63, Subpart FFFF - *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*:** Pursuant to 40 CFR §63.2435(b), organic chemical manufacturing process units (MCPU) include the equipment necessary to operate a miscellaneous organic chemical manufacturing process as defined in 40 CFR §63.2550 that satisfies all of the conditions specified in paragraphs (b)(1) through (3) of §63.2435. Although the Neal Plant meets the criteria in paragraphs (b)(1) and (b)(3) it does not meet the criteria in paragraph (b)(2) in that it does not use, or generate any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP, as defined in 40 CFR §63.2550. Therefore, the Neal Plant does not operate an MCPU subject to this subpart.
- 6) **40 CFR 63 Subpart DDDDD—*National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*:** With the

permanent shutdown of the coal fired boiler B602, January 4, 2010, the Neal Plant facility became an area source of HAPs prior to the compliance dates of this subpart and therefore is not subject to this subpart.

- 7) **40 CFR 63 Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources:** All of the boilers at the Neal Plant facility are natural gas-fired boilers therefore meeting the definition of a “gas-fired” boiler in 40 CFR §63.11237. Pursuant to 40 CFR §63.11195(e), the boilers are not subject to this subpart.
- 8) **40 CFR 63, Subpart VVVVVV (GACT 6V) - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources:** The Neal Plant facility does not use as feedstock, generate as a byproduct, or produce as product in the chemical manufacturing process unit, any of the HAPs listed in Table 1 of this subpart and therefore does not meet the applicability condition in 40 CFR §63.11494(a)(2).
- 9) **CFR Part 64 - Compliance Assurance Monitoring (CAM):** CAM is not applicable to Boiler B604 since the potential emissions are less than 100 tons per year for any pollutant. Furthermore, it does not have any add on pollution control devices.

#### **Request for Variances or Alternatives**

None.

#### **Insignificant Activities**

Insignificant emission unit(s) and activities are identified in the Title V application.

#### **Comment Period**

Beginning Date:	September 6, 2017
Ending Date:	October 6, 2017

#### **Point of Contact**

All written comments should be addressed to the following individual and office:

Frederick Tipane  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1215 • Fax: 304/926-0478  
frederick.tipane@wv.gov

#### **Procedure for Requesting Public Hearing**

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

#### **Response to Comments (Statement of Basis)**

Not applicable.